SA-WMSP2/WMSP4

SERVICE MANUAL

Ver 1.0 2002. 02

US Model
Canadian Model
AEP Model
UK Model
E Model

photo: SA-WMSP4 silver model

- SA-WMSP2 is the sub woofer section in HT-DDW740.
- SA-WMSP4 is the sub woofer section in HT-DDW840.

SPECIFICATION

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads, from 28 – 200 Hz; rated 100 watts (SA-WMSP4) / 50 watts (SA-WMSP2), minimum RMS power, with no more than 0.8% total harmonic distortion from 250 milliwatts to rated output (Models of area code U only).

Speaker system Active subwoofer, magnetically shielded

Speaker unit Woofer: 20 cm cone type

Enclosure type Acoustically loaded bass reflex

Continuous RMS power output (6 ohms, 20 – 250 Hz)
SA-WMSP4 100 W
SA-WMSP2 50 W

Reproduction frequency range
28Hz – 200 Hz

High frequency cut-off frequency
150 Hz

Input LINE IN (input pin jacks)

Power requirements

Area code	Power requirements
U, CA, MX	120 V AC, 60 Hz
CEL, CEK, SP, MY	230 V AC, 50/60 Hz
AR	220 – 230 V AC, 50/60 Hz
E2/E3	120/220/230 V AC, 50/60 Hz

Power consumption
SA-WMSP4 100 W
SA-WMSP2 50 W

Dimensions (w/h/d) Approx. 272 326 405 mm (10 3/4 12 7/8 16 inches) including front panel

Mass
SA-WMSP4 10.0 kg (22 lb 1 oz)
SA-WMSP2 9.0 kg (19 lb 14 oz)

- Abbreviation
  AR : Argentin model
  CA : Canadian model
  CEK : UK model
  CEL : AEP model
  MX : Mexican model
  MY : Malaysia model
  SP : Singapore model
  U : US model

ACTIVE SUBWOOFER

9-873-478-01
2002B1600-1
© 2002.02

Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

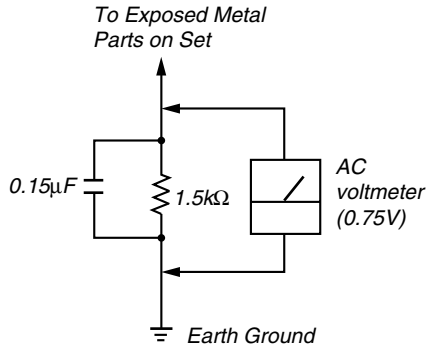


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SECTION 1
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▒▒▒ : Pattern from the side which enables seeing.

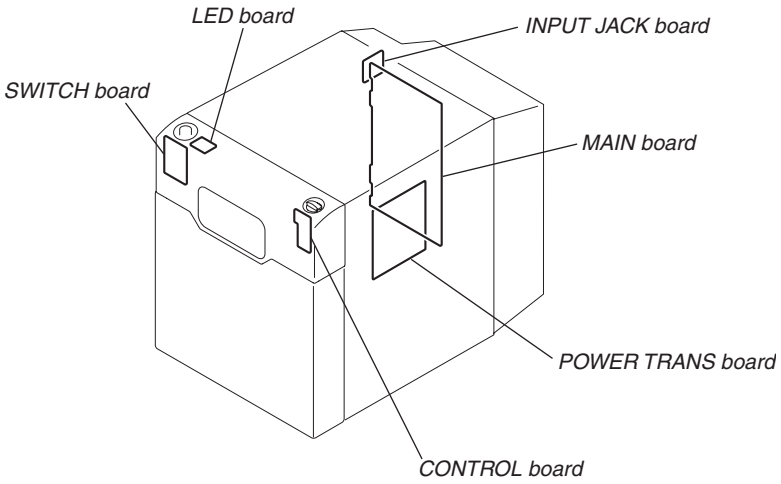
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. p: pF. 50 WV or less are not indicated except for electrolytics and tantalums.
- : nonflammable resistor.
- : fusible resistor.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : panel designation.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

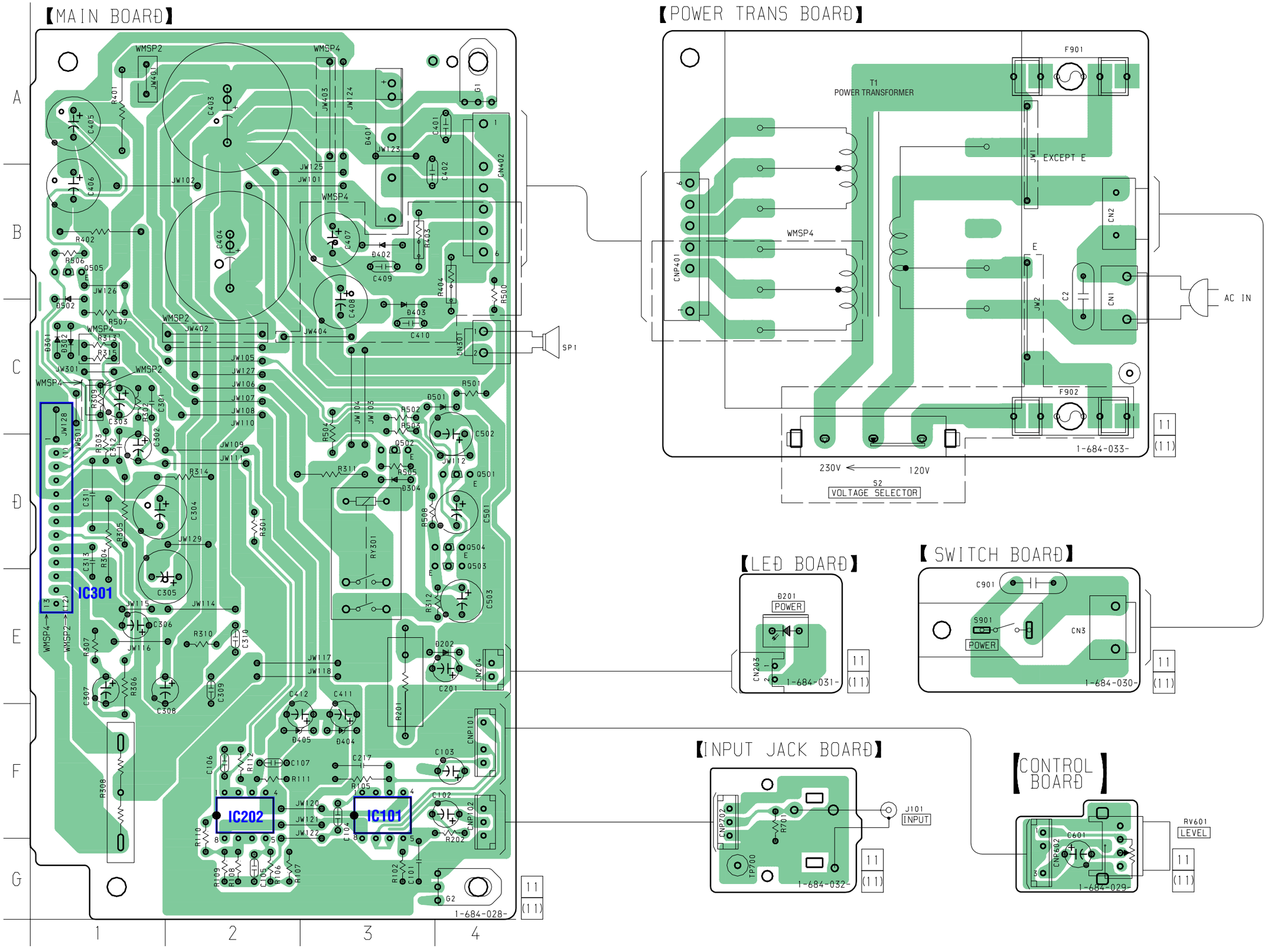
- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : Power on
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : AUDIO
- Abbreviation
  AR : Argentin model.
  CND : Canadian model.
  MX : Mexican model.
  MY : Malaysia model.
  SP : Singapore model.

• CIRCUIT BOARD LOCATION



1-1. Printed Wiring Boards

• See page 3 for Circuit Boards Location.

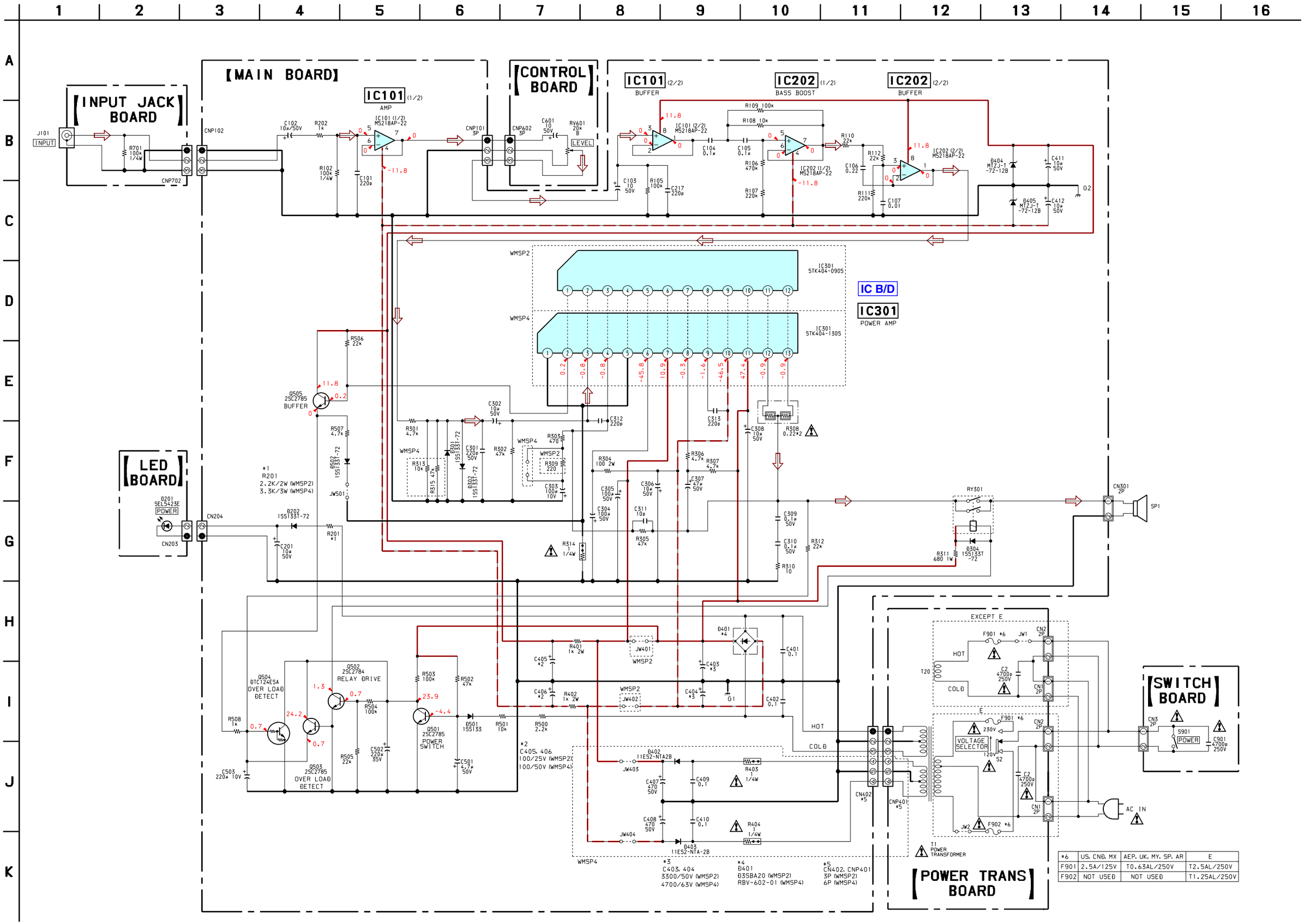


• **Semiconductor Location**

Ref. No.	Location
D202	E-4
D301	C-1
D302	C-1
D304	D-3
D401	A-3
D402	B-3
D403	C-3
D404	F-3
D405	F-2
D501	C-4
D502	B-1
IC101	F-3
IC202	F-2
IC301	D-1
Q501	D-4
Q502	D-3
Q503	D-4
Q504	D-4
Q505	B-1

1-2. Schematic Diagrams

• See page 4 for IC Block Diagrams.



*6	US, CND, MX	AEP, UK, MY, SP, AR	E
F901	2.5A/125V	T0.63AL/250V	T2.5AL/250V
F902	NOT USED	NOT USED	T1.25AL/250V

SECTION 2
EXPLODED VIEWS

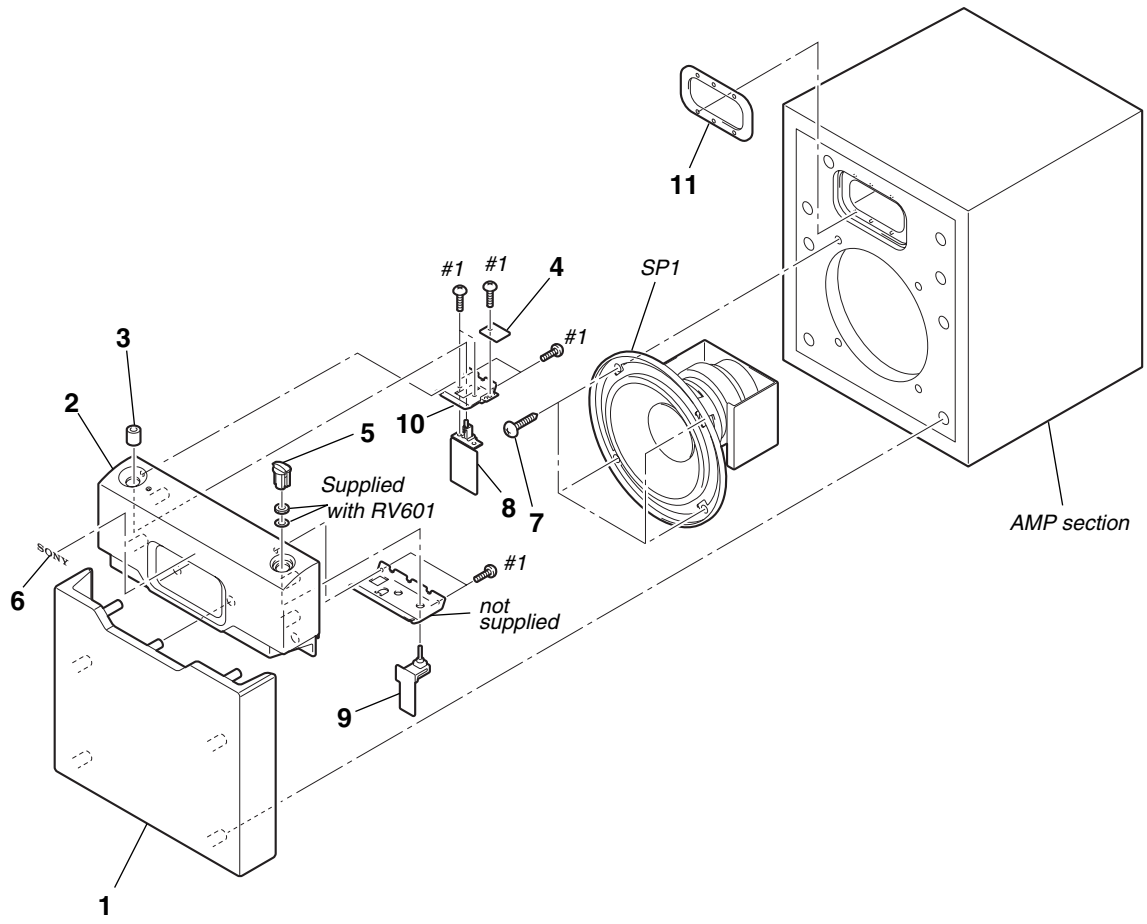
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.
- Abbreviation
  AR : Argentin model
  CND : Canadian model
  MX : Mexican model
  MY : Malaysia model
  SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

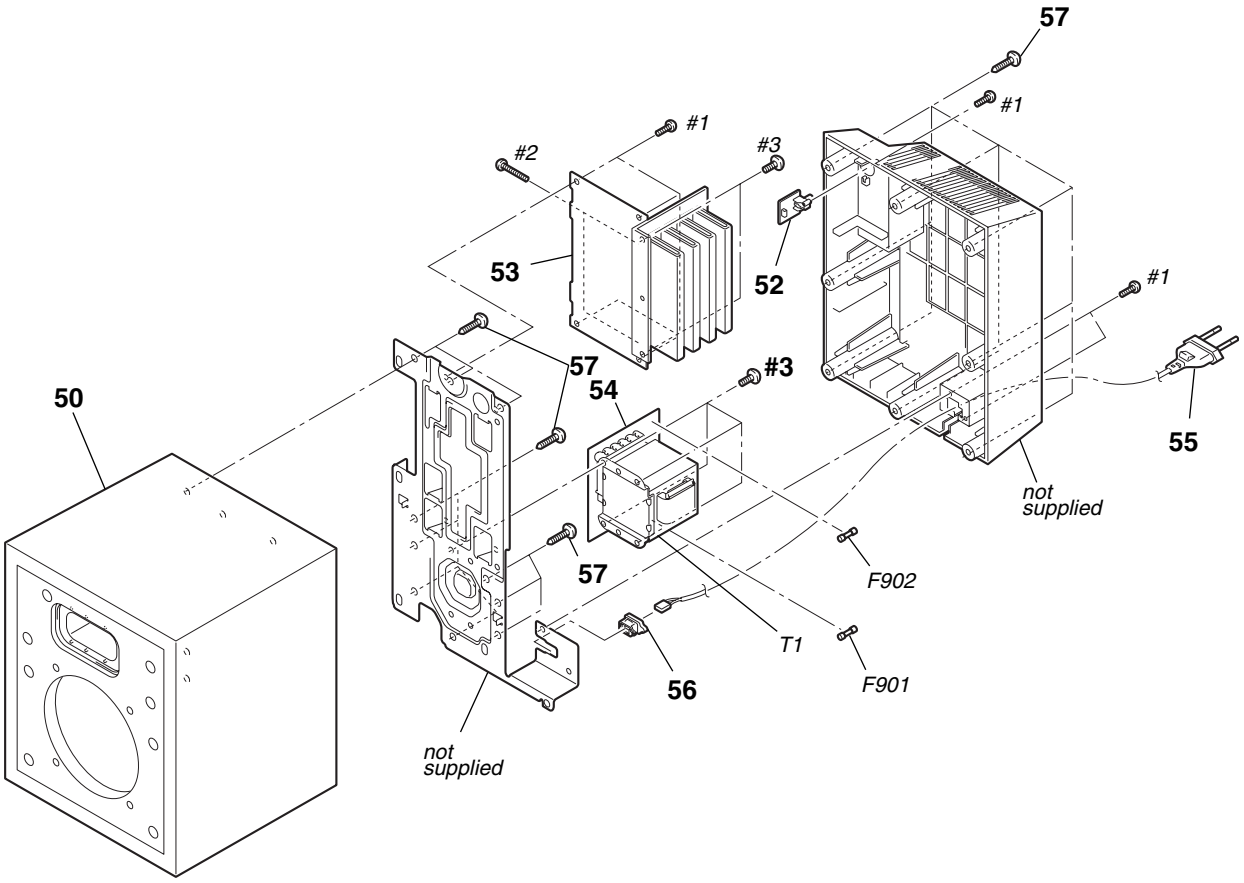
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

2-1. Front Section



Ref. No.	Part No.	Description	Remarks
1	X-4953-515-1	FRAME (SILVER) ASSY, GRILLE (SILVER)	
1	X-4953-516-1	FRAME (BLACK) ASSY, GRILLE (BLACK)	
2	4-232-530-01	PANEL, FRONT (SILVER) (WMSP2:UK,AEP,MY,SP,E)	
2	4-232-530-21	PANEL, FRONT (SILVER) (WMSP2:US,CND)	
2	4-232-530-31	PANEL, FRONT (BLACK) (WMSP2:US)	
2	4-232-530-41	PANEL, FRONT (SILVER) (WMSP4:AR,UK,AEP,MY,SP,E,MX)	
2	4-232-530-51	PANEL, FRONT (BLACK) (WMSP4:US)	
2	4-232-530-61	PANEL, FRONT (SILVER) (WMSP4:US,CND)	
3	4-973-938-81	KNOB (A), PUSH (SILVER)	
3	4-973-938-91	KNOB (A), PUSH (BLACK)	
4	1-684-031-11	LED BOARD	
5	4-232-527-01	KNOB, VOLUME (SILVER)	
5	4-232-527-11	KNOB, VOLUME (BLACK)	
6	4-998-417-02	EMBLEM (NO.5), SONY	
7	4-235-677-01	SCREW (4X20) (TYPE1), +BVTP	
8	1-684-030-11	SWITCH BOARD	
9	1-684-029-11	CONTROL BOARD	
10	4-232-531-01	PLATE, LIGHT GUIDE	
11	4-232-534-01	PACKING (DUCT)	
SP1	1-529-995-11	SPEAKER (20cm) (WMSP2)	
SP1	1-825-004-11	LOUD SPEAKER (WMSP4)	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	

2-2. Amp Section



Ref. No.	Part No.	Description	Remarks
50	A-4735-752-A	SPEAKER CABINET ASSY (SILVER) (WMSP2:E,US,CND/WMSP4:AR,E,MX,US,CND)	
50	A-4735-942-A	SPEAKER CABINET ASSY (SILVER) (WMSP2:UK,AEP,MY,SP/WMSP4:UK,AEP,MY,SP)	
50	A-4735-944-A	SPEAKER CABINET ASSY (BLACK) (WMSP2:US/WMSP4:US)	
52	1-684-032-11	INPUT JACK BOARD	
53	A-4727-932-A	MAIN BOARD, COMPLETE (WMSP2)	
53	A-4727-938-A	MAIN BOARD, COMPLETE (WMSP4)	
54	1-684-033-11	POWER TRANS BOARD	
⚠55	1-769-744-11	CORD, POWER (UK,AEP,MY,SP)	
⚠55	1-783-528-11	CORD, POWER (TRACKING) (E)	
⚠55	1-783-820-11	CORD, POWER (US,CND,MX)	
⚠55	1-783-941-12	CORD, POWER (WMSP4:AR)	
* 56	3-703-244-00	BUSHING (2104), CORD	
57	4-235-677-01	SCREW (4X20) (TYPE1), +BVTP	
⚠F901	1-532-463-51	FUSE (T1AL/250V) (WMSP4:AR,UK,AEP,MY,SP)	
⚠F901	1-532-464-31	FUSE (T2.5AL/250V) (WMSP2:E/WMSP4:E)	
⚠F901	1-532-500-31	FUSE (T0.63AL/250V) (WMSP2:UK,AEP,MY,SP)	
⚠F901	1-532-744-11	FUSE, GLASS TUBE (2.5A/125V) (WMSP2:US,CND/WMSP4:US,CND,MX)	
⚠F902	1-532-502-51	FUSE (T1.25AL/250V) (WMSP2:E/WMSP4:E)	
⚠T1	1-437-657-11	POWER TRANSFORMER (WMSP2:E)	
⚠T1	1-437-658-11	POWER TRANSFORMER (WMSP2:UK,AEP,MY,SP)	
⚠T1	1-437-659-11	POWER TRANSFORMER (WMSP2:US,CND)	
⚠T1	1-437-660-11	POWER TRANSFORMER (WMSP4:AR,UK,AEP,MY,SP)	
⚠T1	1-437-661-11	POWER TRANSFORMER (WMSP4:US,CND,MX)	
⚠T1	1-437-662-11	POWER TRANSFORMER (WMSP4:E)	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#3	7-685-881-09	SCREW +BVTT 4X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 3
ELECTRICAL PARTS LIST

CONTROL | INPUT JACK | LED | MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...
- Abbreviation
  AR : Argentin model
  CND : Canadian model
  MX : Mexican model
  MY : Malaysia model
  SP : Singapore model

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
	1-684-029-11	CONTROL BOARD			
		**********			
		< CAPACITOR >			
C601	1-126-964-11	ELECT	10uF	20.00%	50V
		< CONNECTOR >			
CNP602	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
		< VARIABLE RESISTOR >			
RV601	1-227-364-11	RES, VAR, CARBON 20K (INPUT)			
**********					
	1-684-032-11	INPUT JACK BOARDB			
		**********			
		< JACK >			
J101	1-815-025-11	JACK, PIN 1P (INPUT)			
		< RESISTOR >			
R701	1-249-441-11	CARBON	100K	5%	1/4W
**********					
	1-684-031-11	LED BOARD			
		********			
		< CONNECTOR >			
* CN203	1-564-517-11	PLUG, CONNECTOR 2P			
		< DIODE >			
D201	8-719-058-03	DIODE SEL5423E-TP15 (POWER)			
**********					
	A-4727-932-A	MAIN BOARD, COMPLETE (WMSP2)			
	A-4727-938-A	MAIN BOARD, COMPLETE (WMSP4)			
		**********			
		< CAPACITOR >			
C101	1-128-813-11	CERAMIC	220PF	5%	50V
C102	1-126-964-11	ELECT	10uF	20.00%	50V
C103	1-126-964-11	ELECT	10uF	20.00%	50V
C104	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C105	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C106	1-136-169-00	MYLAR	0.22uF	5.00%	50V
C107	1-136-153-00	FILM	0.01uF	5%	50V
C201	1-126-964-11	ELECT	10uF	20.00%	50V
C217	1-128-813-11	CERAMIC	220PF	5%	50V
C301	1-128-813-11	CERAMIC	220PF	5%	50V
C302	1-126-964-11	ELECT	10uF	20.00%	50V
C303	1-104-665-11	ELECT	100uF	20.00%	10V
C304	1-126-968-11	ELECT	100uF	20.00%	50V
C305	1-126-968-11	ELECT	100uF	20.00%	50V
C306	1-126-964-11	ELECT	10uF	20.00%	50V
C307	1-126-967-11	ELECT	47uF	20.00%	50V
C308	1-126-964-11	ELECT	10uF	20.00%	50V
C309	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C310	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C311	1-162-199-31	CERAMIC	10PF	5%	50V
C312	1-128-813-11	CERAMIC	220PF	5%	50V
C313	1-128-813-11	CERAMIC	220PF	5%	50V
C401	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C402	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C403	1-126-974-11	ELECT	3300uF	20.00%	50V (WMSP2)
C403	1-104-482-11	ELECT	4700uF	20.00%	63V (WMSP4)
C404	1-126-974-11	ELECT	3300uF	20.00%	50V (WMSP2)
C404	1-104-482-11	ELECT	4700uF	20.00%	63V (WMSP4)
C405	1-104-665-11	ELECT	100uF	20.00%	25V (WMSP2)
C405	1-126-968-11	ELECT	100uF	20.00%	50V (WMSP4)
C406	1-104-665-11	ELECT	100uF	20.00%	25V (WMSP2)
C406	1-126-968-11	ELECT	100uF	20.00%	50V (WMSP4)
C407	1-126-971-11	ELECT	470uF	20.00%	50V (WMSP4)
C408	1-126-971-11	ELECT	470uF	20.00%	50V (WMSP4)
C409	1-136-165-00	MYLAR	0.1uF	5.00%	50V (WMSP4)

MAIN

Ref. No.	Part No.	Description			Remarks
C410	1-136-165-00	MYLAR	0.1uF	5.00%	50V (WMSP4)
C411	1-126-964-11	ELECT	10uF	20.00%	50V
C412	1-126-964-11	ELECT	10uF	20.00%	50V
C501	1-126-963-11	ELECT	4.7uF	20.00%	50V
C502	1-126-949-11	ELECT	220uF	20.00%	35V
C503	1-126-934-11	ELECT	220uF	20.00%	10V
		< CONNECTOR >			
CN204	1-564-505-11	PLUG, CONNECTOR 2P			
CN301	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CN402	1-785-101-11	PIN, CONNECTOR 3P (WMSP2)			
CN402	1-785-104-11	PIN, CONNECTOR 6P (WMSP4)			
CNP101	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
* CNP102	1-506-945-11	PIN, CONNECTOR 3P			
* CNP702	1-506-945-11	PIN, CONNECTOR 3P			
		< DIODE >			
D202	8-719-911-19	DIODE 1SS133T-72			
D301	8-719-911-19	DIODE 1SS133T-72			
D302	8-719-911-19	DIODE 1SS133T-72			
D304	8-719-911-19	DIODE 1SS133T-72			
D401	8-719-500-56	DIODE D3SBA20 (WMSP2)			
D401	8-719-302-38	DIODE RBV-602-01 (WMSP4)			
D402	8-719-024-99	DIODE 11ES2-NTA2B (WMSP4)			
D403	8-719-024-99	DIODE 11ES2-NTA2B (WMSP4)			
D404	8-719-110-31	DIODE MTZJ-T-72-12B			
D405	8-719-110-31	DIODE MTZJ-T-72-12B			
D501	8-719-911-19	DIODE 1SS133T-72			
D502	8-719-911-19	DIODE 1SS133T-72			
		< TERMINAL >			
* G1	1-537-738-11	TERMINAL, EARTH (WMSP2)			
* G1	1-537-738-21	TERMINAL, EARTH (WMSP4)			
* G2	1-537-738-11	TERMINAL, EARTH (WMSP2)			
* G2	1-537-738-21	TERMINAL, EARTH (WMSP4)			
		< IC >			
IC101	8-759-636-74	IC M5218AP-22			
IC202	8-759-636-74	IC M5218AP-22			
IC301	6-600-090-01	IC STK404-090S (WMSP2)			
IC301	6-600-091-01	IC STK404-130S (WMSP4)			
		< TRANSISTOR >			
Q501	8-729-119-78	TRANSISTOR	2SC2785TP-E		
Q502	8-729-178-42	TRANSISTOR	2SC2784-EFP-TP		
Q503	8-729-119-78	TRANSISTOR	2SC2785TP-E		
Q504	8-729-029-86	TRANSISTOR	DTC124ESA-TP		
Q505	8-729-119-78	TRANSISTOR	2SC2785TP-E		
		< RESISTOR >			
R102	1-249-441-11	CARBON	100K	5%	1/4W
R105	1-249-441-11	CARBON	100K	5%	1/4W
R106	1-247-895-00	CARBON	470K	5%	1/4W
R107	1-247-887-00	CARBON	220K	5%	1/4W
R108	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R109	1-249-441-11	CARBON	100K	5%	1/4W
R110	1-249-433-11	CARBON	22K	5%	1/4W
R111	1-247-887-00	CARBON	220K	5%	1/4W
R112	1-249-433-11	CARBON	22K	5%	1/4W
R201	1-215-894-11	METAL OXIDE	2.2K	5%	2W (WMSP2)
R201	1-215-920-11	METAL OXIDE	3.3K	5%	3W (WMSP4)
R202	1-249-417-11	CARBON	1K	5%	1/4W F
R301	1-249-425-11	CARBON	4.7K	5%	1/4W F
R302	1-249-437-11	CARBON	47K	5%	1/4W
R303	1-249-413-11	CARBON	470	5%	1/4W F
R304	1-215-886-11	METAL OXIDE	100	5%	2W
R305	1-249-437-11	CARBON	47K	5%	1/4W
R306	1-249-425-11	CARBON	4.7K	5%	1/4W F
R307	1-249-425-11	CARBON	4.7K	5%	1/4W F
⚠ R308	1-233-352-41	ENCAPSULATED COMPONENT			0.22X2
R309	1-249-409-11	CARBON	220	5%	1/4W F (WMSP2)
R310	1-249-393-11	CARBON	10	5%	1/4W F
R311	1-215-868-00	METAL OXIDE	680	5%	1W
R312	1-249-433-11	CARBON	22K	5%	1/4W
R313	1-249-429-11	CARBON	10K	5%	1/4W (WMSP4)
⚠ R314	1-217-637-00	FUSIBLE	1	5%	1/4W
R315	1-249-437-11	CARBON	47K	5%	1/4W (WMSP4)
R401	1-215-892-11	METAL OXIDE	1K	5%	2W
R402	1-215-892-11	METAL OXIDE	1K	5%	2W
⚠ R403	1-217-637-00	FUSIBLE	1	5%	1/4W (WMSP4)
⚠ R404	1-217-637-00	FUSIBLE	1	5%	1/4W (WMSP4)
R500	1-249-421-11	CARBON	2.2K	5%	1/4W F
R501	1-249-429-11	CARBON	10K	5%	1/4W
R502	1-249-437-11	CARBON	47K	5%	1/4W
R503	1-249-441-11	CARBON	100K	5%	1/4W
R504	1-249-441-11	CARBON	100K	5%	1/4W
R505	1-249-433-11	CARBON	22K	5%	1/4W
R506	1-249-433-11	CARBON	22K	5%	1/4W
R507	1-249-425-11	CARBON	4.7K	5%	1/4W F
R508	1-249-417-11	CARBON	1K	5%	1/4W F
		< RELAY >			
RY301	1-515-920-11	RELAY (24V)			

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER TRANS | SWITCH

Ref. No.	Part No.	Description	Remarks
	1-684-033-11	POWER TRANS BOARD	
		**********	
	1-533-233-11	HOLDER, FUSE	
		< CAPACITOR >	
⚠C2	1-113-924-11	CERAMIC 0.0047uF 20.00% 250V	
		< CONNECTOR >	
CN1	1-564-321-00	PIN, CONNECTOR 2P	
* CN2	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
		< SWITCH >	
⚠S2	1-762-753-11	SWITCH, VOL-SEL (VOLTAGE SELECTOR) (E)	
**********			
	1-684-030-11	SWITCH BOARD	
		**********	
		< CAPACITOR >	
⚠C901	1-113-924-11	CERAMIC 0.0047uF 20.00% 250V	
		< CONNECTOR >	
CN3	1-564-321-00	PIN, CONNECTOR 2P	
		< SWITCH >	
⚠S901	1-786-325-11	SWITCH, POWER (POWER)	
**********			

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
⚠15	1-769-744-11	CORD, POWER (UK,AEP,MY,SP)	
⚠15	1-783-528-11	CORD, POWER (TRACKING) (E)	
⚠15	1-783-820-11	CORD, POWER (US,CND,MX)	
⚠15	1-783-941-12	CORD, POWER (AR)	
⚠F901	1-532-463-51	FUSE (T1AL/250V) (WMSP4:AR,UK,AEP,MY,SP)	
⚠F901	1-532-464-31	FUSE (T2.5AL/250V) (WMSP2:E/WMSP4:E)	
⚠F901	1-532-500-31	FUSE (T0.63AL/250V) (WMSP2:UK,AEP,MY,SP)	
⚠F901	1-532-744-11	FUSE, GLASS TUBE (2.5A/125V) (WMSP2:US,CND/WMSP4:US,CND,MX)	
⚠F902	1-532-502-51	FUSE (T1.25AL/250V) (WMSP2:E/WMSP4:E)	
SP1	1-529-995-11	SPEAKER (20cm) (WMSP2)	
SP1	1-825-004-11	LOUD SPEAKER (WMSP4)	
⚠T1	1-437-657-11	POWER TRANSFORMER (WMSP2:E)	
⚠T1	1-437-658-11	POWER TRANSFORMER (WMSP2:UK,AEP,MY,SP)	
⚠T1	1-437-659-11	POWER TRANSFORMER (WMSP2:US,CND)	
⚠T1	1-437-660-11	POWER TRANSFORMER (WMSP4:AR,UK,AEP,MY,SP)	
⚠T1	1-437-661-11	POWER TRANSFORMER (WMSP4:US,CND,MX)	
⚠T1	1-437-662-11	POWER TRANSFORMER (WMSP4:E)	
**********			
		ACCESSORIES	
		**********	
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (E)	
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#3	7-685-881-09	SCREW +BVTT 4X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002.02	New